

Date: Wednesday, 09/01/2008 8:18:46 AM
 User: Jean-Luc Menard

Process Sheet

Customer : CU-DAR001 Dart Helicopters Services Drawing Name : 03.250 SUPPORT
 Job Number : 35478
 Estimate Number : 10387
 P.O. Number :
 This Issue : 09/01/2008 S.O. No. :
 Prsht Rev. : NC
 First Issue : 31/10/2007 Type : MACHINED PARTS
 Previous Run : 32780
 Written By : *[Signature]* 08.01.09
 Checked & Approved By :
 Comment : Est. C 02.11.26 Reformat; Added P/O KJ
 Est Rev:D Added priming as per Rev B 07-04-30 JLM

Part Number : D29401
 Drawing Number : D2940 REV B
 Project Number : N/A
 Drawing Revision : B
 Material :
 Due Date : 20/11/2007 Qty: 10 Um: Each

Additional Product

Job Number:



Seq. #: Machine Or Operation: Description :

1.0 D6104007 17-4 SS Roundbar 4.50"OD



Comment: Qty.: 1.0000 Each(s)/Unit Total : 10.0000 Each(s).

17-4 SS Roundbar 4.50"OD

D6104-007

BATCH: *35582A*

RD 08/01/08-12-13-14

2.0 35478A ROUND BILLET 17-4



Comment: Sub Component ROUND BILLET 17-4

D6104-007 B

RD 08/01/08-12-13-14

3.0 DOOSAN LATHE DOOSAN LATHE



Comment: DOOSAN LATHE

Turn blank for Haas as per Folio FA079

RD 08/01/08-12-13-14

4.0 QC1 INSPECT ALL DIM TO DIM SHEET



Comment: INSPECT ALL DIM TO DIM SHEET

RD 08/03/18

(9)

5.0 HAAS1 HAAS CNC VERTICAL MACHINING #1



Comment: HAAS

1- Machine as per Folio FA079

2- Tumble & Deburr

RD 08-01-18

Date: Wednesday, 09/01/2008 8:18:46 AM
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Drawing Name: 03.250 SUPPORT

Job Number: 35478

Part Number: D29401

Job Number:



Seq. #:

Machine Or Operation:

Description :

6.0

QC1

INSPECT ALL DIM TO DIM SHEET



Comment: INSPECT ALL DIM TO DIM SHEET

EG 08-04-18

(9)

7.0

QC8

SECOND CHECK



Comment: SECOND CHECK

ml 08/04/18

8.0

POWDER COATING

POWDER COATING



Comment: POWDER COATING

Powder Coat White Gloss (Ref: 4.3.5.2) as per QSI 005 4.3

*****Mask Inside Surface as per Dwg D2940*****

M 107550

BR 08-04-20

30 min.

22/04/2008

S.089 13.33

#1 398.9

#3 35478

#4 29401

9.0

SPRAY PAINTING

SPRAY PAINTING



Comment: SPRAY PAINTING

Prime inside surface as per Dwg D2940 and QSI 005 4.3.

ml 08 04 24

(18)

10.0

QC3

INSPECT POWDER COAT/CHEMICAL CONVERSION



Comment: INSPECT POWDER COAT/CHEMICAL CONVERSION

RT 08-04-25

18

11.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Identify and Stock

Location: LG

ml 08 04 25

18

12.0

QC21

FINAL INSPECTION/W/O RELEASE



Comment: FINAL INSPECTION/W/O RELEASE

08/04/28

Job Completion



mf 08-04-25

DART AEROSPACE LTD	Work Order:	39478
Description: Ø3.250 Support	Part Number:	D2940-1
Inspection Dwg: D2940 Rev. B		Page 1 of 1

Inspect dimensions highlighted on inspection sheet drawing D2940 Rev. B / DSK081 Rev. B & record below:

				Recorded Actual Dimensions					
Dim	Min	Max	Go/No Go Gauge	1	2	3	4	By	Date
Lathe Section									
A	3.211	3.216		3.215	3.215	3.215	3.215		
B	4.946	4.966		4.956	4.956	4.956	4.956		
C	0.718	0.738		.726	.726	.727	.726		
D	0.090	0.110		.103	.103	.103	.100		
E	3.564	3.584		3.574	3.574	3.574	3.574		
F	0.022	0.042		.03	.03	.03	.03		
G	3.444	3.464		3.454	3.454	3.454	3.455		
H	0.112	0.132		.122	.122	.122	.122		
I	2.170	2.190		2.18	2.18	2.18	2.18		
J	4.451	4.471		4.461	4.461	4.461	4.461		
K	0.413	0.433		.423	.423	.423	.423		
L	0.913	0.933		.923	.923	.923	.923		
M									
N									
HAAS Section									
AA	0.240	0.260		.250	.250	.250	.250		
AB	0.490	0.510		.500	.500	.500	.500		
AC	0.140	0.160		.150	.151	.151	.151		
AD	3.510	3.530		3.518	3.519	3.525	3.526		
AE	1.633	1.673		1.657	1.653	1.659	1.660		
AF	1.493	1.513		1.504	1.503	1.503	1.502		
AG	0.040	0.060		.051	.052	.051	.051		
AH	0.188	0.193		.189	.189	.189	.189		
AI	0.140	0.160		.152	.151	.151	.151		
AJ	2.518	2.538		2.538	2.538	2.538	2.538		
AK	0.040	0.060		.050	.052	.050	.050		
AL	0.010	0.020		.011	.011	.011	.011		
AM	0.140	0.160		.152	.151	.152	.150		
AN	0.350	0.450		.380	.380	.380	.380		
AO	0.240	0.260		.250	.250	.250	.250		
AP	0.150	0.170		.151	.151	.156	.156		
AQ	0.053	0.073		.063	.063	.063	.063		
AR	101.64	105.64		103.64	103.64	103.64	103.64		
AS	0.260	0.267		.260	.260	.260	.260		
AT	0.053	0.073		.063	.063	.063	.063		
AU	4.118	4.138		4.129	4.126	4.122	4.129		
AV									
Accept/Reject									

Measured by:	<i>JP</i>
Date:	<i>08/03/18</i>

Audited by:	<i>me</i>
Date:	<i>08/04/18</i>

Rev	Date	Change	Revised by	Approved
A	02.12.12	New Issue	KJ/RF	
B	07.05.08	Dwg Rev. updated	KJ/JLM	
C	07.07.18	Dimension AS revised	KJ/JLM	<i>BE</i>

DART AEROSPACE LTD	Work Order:	35478
Description: Ø3.250 Support	Part Number:	D2940-1
Inspection Dwg: D2940 Rev. B		Page 1 of 1

Inspect dimensions highlighted on inspection sheet drawing D2940 Rev. B / DSK081 Rev. B & record below:

				Recorded Actual Dimensions					
Dim	Min	Max	Go/No Go Gauge	15	16	17	18	By	Date
Lathe Section									
A	3.211	3.216		3.215	3.215	3.215	3.215		
B	4.946	4.966		4.956	4.956	4.956	4.956		
C	0.718	0.738		.728	.728	.728	.728		
D	0.090	0.110		.101	.103	.100	.100		
E	3.564	3.584		3.574	3.574	3.574	3.574		
F	0.022	0.042		.03	.03	.03	.03		
G	3.444	3.464		3.454	3.453	3.453	3.454		
H	0.112	0.132		.122	.122	.122	.122		
I	2.170	2.190		2.18	2.18	2.18	2.18		
J	4.451	4.471		4.461	4.461	4.461	4.461		
K	0.413	0.433		.423	.423	.423	.423		
L	0.913	0.933		.923	.923	.923	.923		
M									
N									
HAAS Section									
AA	0.240	0.260		.250	.250	.250	.250		
AB	0.490	0.510		.500	.500	.500	.500		
AC	0.140	0.160		.150	.150	.150	.150		
AD	3.510	3.530		3.526	3.526	3.526	3.526		
AE	1.633	1.673		1.659	1.659	1.659	1.659		
AF	1.493	1.513		1.501	1.501	1.501	1.501		
AG	0.040	0.060		.050	.050	.050	.050		
AH	0.188	0.193		.190	.190	.190	.190		
AI	0.140	0.160		.143	.143	.143	.143		
AJ	2.518	2.538		2.528	2.528	2.528	2.528		
AK	0.040	0.060		.047	.047	.047	.047		
AL	0.010	0.020		.010	.010	.010	.010		
AM	0.140	0.160		.147	.147	.147	.147		
AN	0.350	0.450		.380	.380	.380	.380		
AO	0.240	0.260		.250	.250	.250	.250		
AP	0.150	0.170		.158	.158	.158	.158		
AQ	0.053	0.073		.063	.063	.063	.063		
AR	101.64	105.64		103.64	103.64	103.64	103.64		
AS	0.260	0.267		.260	.260	.260	.260		
AT	0.053	0.073		.063	.063	.063	.063		
AU	4.118	4.138		4.128	4.128	4.128	4.128		
AV									
Accept/Reject									

Measured by:	<i>RF</i>
Date:	<i>08/03/18</i>

Audited by:	<i>mf</i>
Date:	<i>08/04/18</i>

Rev	Date	Change	Revised by	Approved
A	02.12.12	New Issue	KJ/RF	
B	07.05.08	Dwg Rev. updated	KJ/JLM	
C	07.07.18	Dimension AS revised	KJ/JLM	<i>RF</i>

DART AEROSPACE LTD	Work Order:	35478
Description: Ø3.250 Support	Part Number:	D2940-1
Inspection Dwg: D2940 Rev. B		Page 1 of 1

Inspect dimensions highlighted on inspection sheet drawing D2940 Rev. B / DSK081 Rev. B & record below:

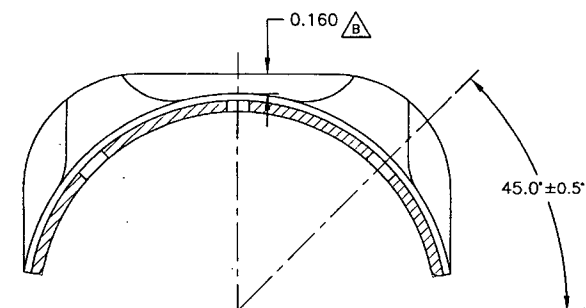
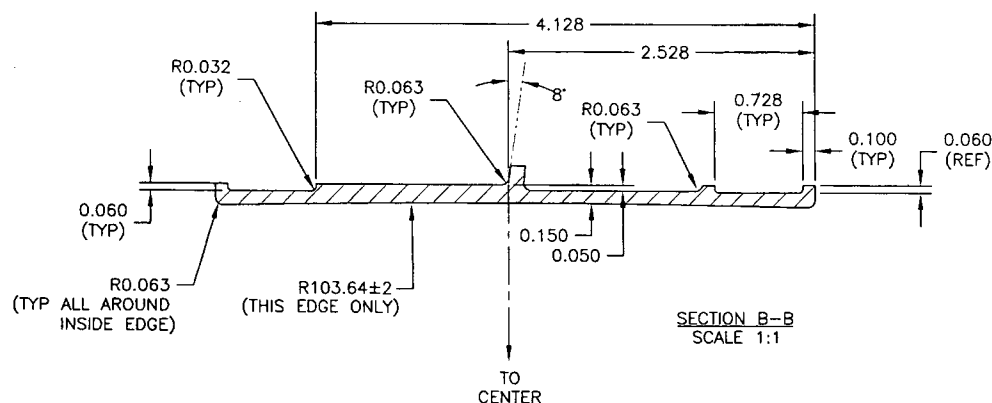
				Recorded Actual Dimensions					
Dim	Min	Max	Go/No Go Gauge	1	2	3	4	By	Date
Lathe Section									
A	3.211	3.216							
B	4.946	4.966							
C	0.718	0.738		.727	.726	.721	.726		
D	0.090	0.110		.102	.102	.101	.100		
E	3.564	3.584		3.574	3.574	3.574	3.574		
F	0.022	0.042		.03	.03	.03	.03		
G	3.444	3.464		3.454	3.454	3.454	3.454		
H	0.112	0.132		.122					
I	2.170	2.190		2.18	2.18	2.18	2.18		
J	4.451	4.471		4.461					
K	0.413	0.433		.423					
L	0.913	0.933		.923					
M									
N									
HAAS Section									
AA	0.240	0.260		.250					
AB	0.490	0.510		.500					
AC	0.140	0.160		.150					
AD	3.510	3.530		3.520					
AE	1.633	1.673		1.653					
AF	1.493	1.513		1.501					
AG	0.040	0.060		.050					
AH	0.188	0.193		.188					
AI	0.140	0.160		.150					
AJ	2.518	2.538		2.528					
AK	0.040	0.060		.050					
AL	0.010	0.020		.010					
AM	0.140	0.160		.150					
AN	0.350	0.450		.400					
AO	0.240	0.260		.250					
AP	0.150	0.170		.160					
AQ	0.053	0.073		.063					
AR	101.64	105.64		103.64					
AS	0.260	0.267		.260					
AT	0.053	0.073		.063					
AU	4.118	4.138		4.128					
AV									
Accept/Reject									

Measured by:	AP
Date:	08/03/18 / 08.04.18

Audited by:	ONE
Date:	08/04/18

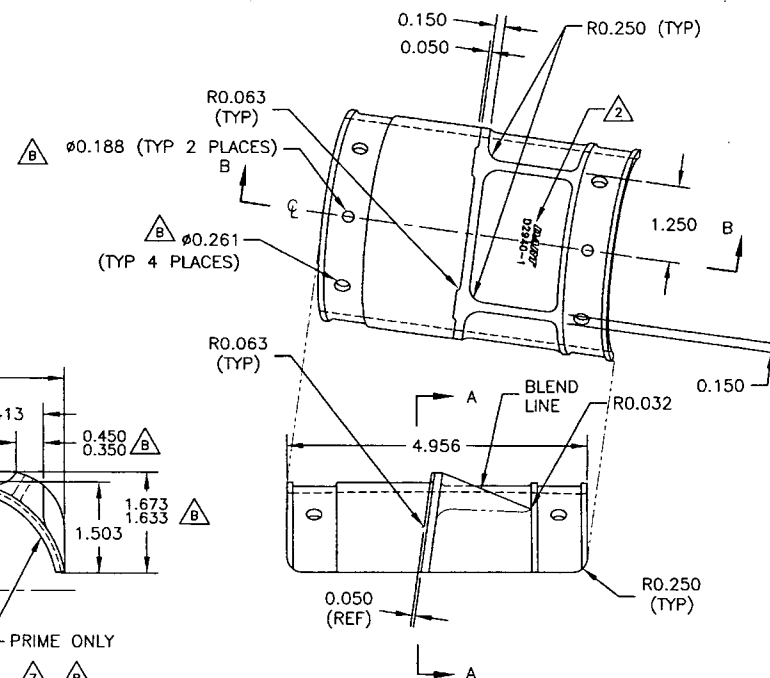
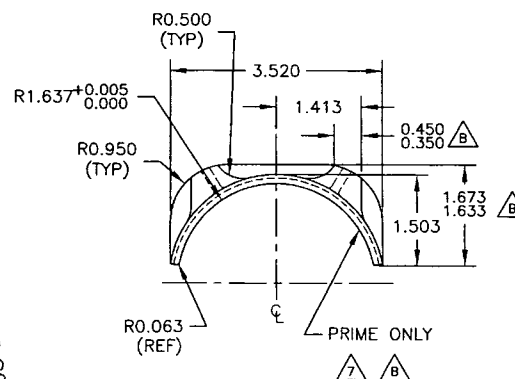
Rev	Date	Change	Revised by	Approved
A	02.12.12	New Issue	KJ/RF	
B	07.05.08	Dwg Rev. updated	KJ/JLM	
C	07.07.18	Dimension AS revised	KJ/JLM	BE

RELEASED
67.4.24 U
PER ENR 8.7



SECTION A-A
TOOLING HOLE DETAIL
SCALE 1:1

UNCONTROLLED COPY
ENGINEERING
RETURN TO
SHOP COPY
NO. 35478
WORK ORDER
SUBJECT TO AMENDMENT
WITHOUT NOTICE



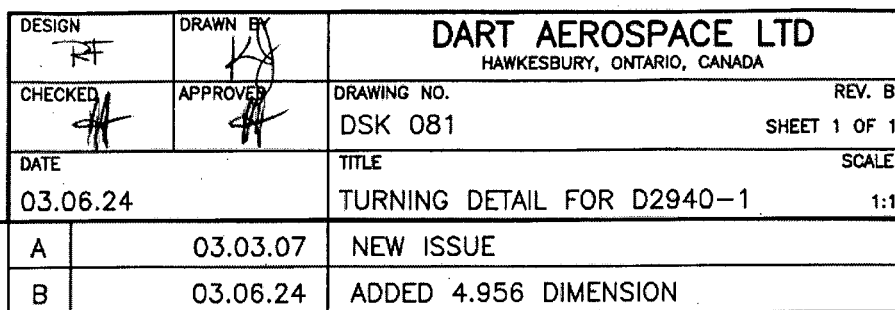
D2940-1

- 1) MATERIAL: 17-4 PH STAINLESS STEEL
HEAT TREAT TO H900 CONDITION
(900°F FOR 1 HR, AIR COOL)
MIN UTS = 170 KSI (38 HRc)
- 2) IDENTIFY WITH DART LOGO AND PART NUMBER IN THIS AREA
WITH 0.125 HIGH LETTERING 0.010-0.020 DEEP
- 3) BREAK ALL UNMARKED SHARP EDGES 0.010 TO 0.020
- 4) PART IS SYMMETRIC ABOUT CENTERLINE
- 5) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 6) ALL DIMENSIONS ARE IN INCHES
- 7) FINISH: POWDER COAT WHITE (REF 4.3.5.2) PER DART QSI 005 4.3
PRIME INSIDE SURFACE AS SHOWN PER DART QSI 005 4.2

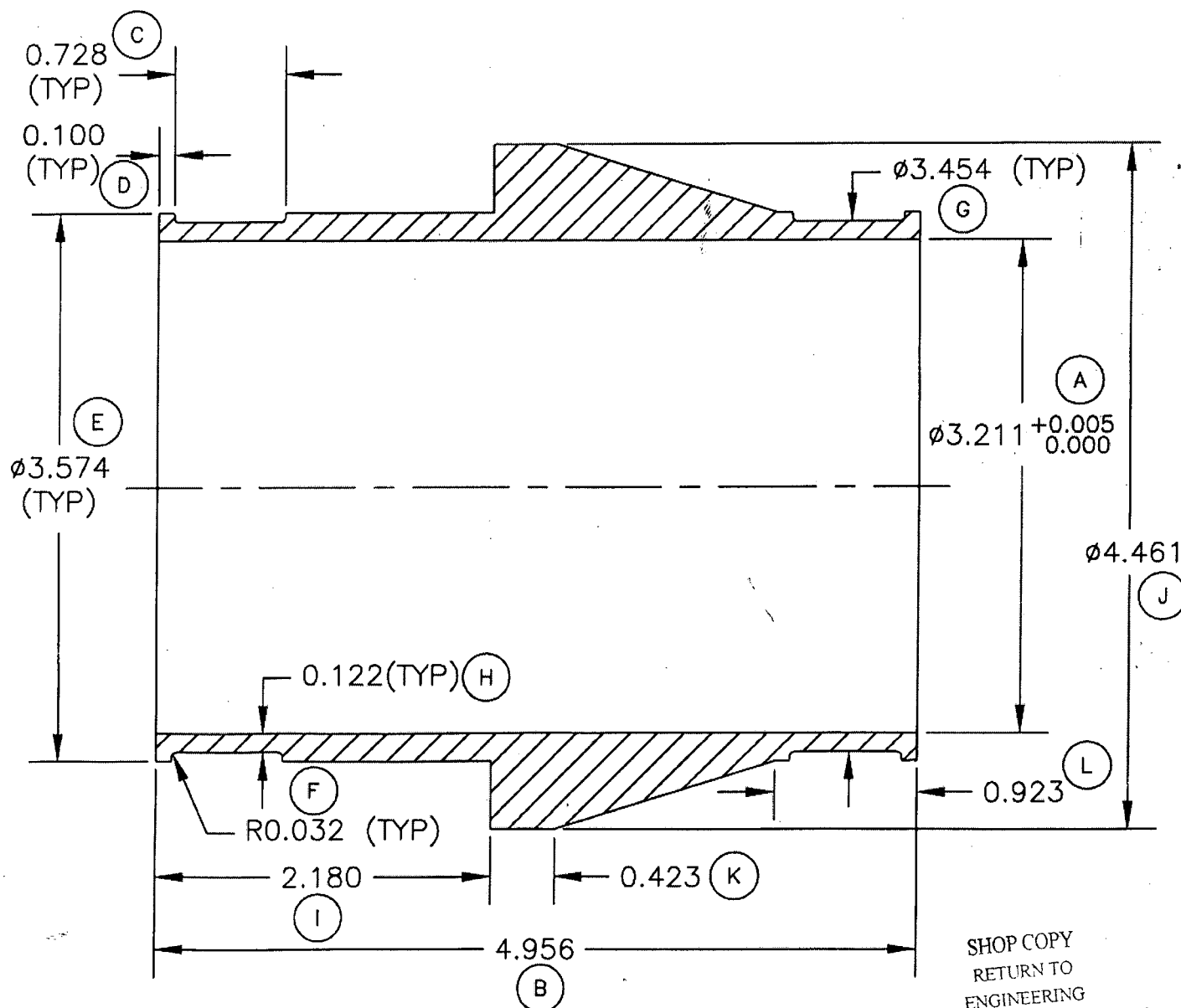
B	07.03.16	UPDATE PER NCR 642, PRIME INSIDE
A	01.01.10	NEW ISSUE
DESIGN	9P	DRAWN BY
CHECKED	9P	APPROVED
DATE	07.03.16	TITLE
		DART DART AEROSPACE LTD. HAWKESBURY, ONTARIO, CANADA
		DRAWING NO. D2940
		REV. B
		SHEET 1 OF 1
		SCALE
		1:2

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OR COPIED OR COMMUNICATED TO ANY OTHER
PERSON WITHOUT WRITTEN PERMISSION FROM
DART AEROSPACE LTD.



RELEASED
03-07-01



D2940-1 TURNING DETAIL

SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 35478

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: D2940-1 PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

QA: N/C Closed: _____ Date: _____

NCR: <u>35478</u>		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			
08/03/18		SC tool change before moving to safe position. tool came in contact with workpiece and scrapped workpiece. R.C. programming error.		Scrap and Destroy Qty (1)	RC 08/03/18	08/04/18		
		tool came in too far on the out side surface, while turning. New program on Doosan		no replace / Program was changed to prevent issue.			08/04/18	

NOTE: Date & initial all entries